NOMENCLATURE

a	- thermal diffusivity, m^2/s	(see, 13.3)
	- dimensionless amplitude of perturbation	(see, 6.5, 13.1.2, 13.5)
	- characteristic length scale for standing waves, m	(see, 10.2)
	- constant, 1/s	(see, 14)
$a = h_{max} - h_{min}$	- wave amplitude, m	
a_0	- initial dimensionless amplitude of perturbation	
a_∞	- asymptotic value of dimensionless amplitude	
a_{max}	- maximum value of dimensionless amplitude	
$a' = h' - h_0$	- amplitude of localized perturbations, m	(see, 9)
$a' = h_{max} - h_{res}$	- amplitude, m	(see, 8)
a'^*	- dimensionless amplitude of soliton	
$\tilde{a}_1$	- dimensionless amplitude of the first harmonic	
$\tilde{a}_m = \dfrac{h_{max} - h_{min}}{h_{max} + h_{min}}$	- amplitude	
a_w	- coefficient of wave thermal diffusivity, m^2/s	
a_t	- coefficient of turbulent thermal diffusivity, m^2/s	
A	- area of phase velocity profile, m^2/s	(see, 6.2; 6.4)

	- amplitude of cross velocity perturbation, m/s	(see, 6.6)
	- intermediate expression	(see, 6.8.4; 6.9)
	- integration constant	(see, 6.11)
$A = h_{\max}$	- amplitude, m	
$A = 3\ \mathrm{ctg}\ \Theta / \mathrm{Re}$	- dimensionless parameter	(see, 6.11; 10.2)
$2A = h_{\max} - (h_{\min,1} + h_{\min,2}) / 2$	- amplitude, m	(see, 11)
$< A >$	- average amplitude of large waves, m	(see, 11)
$\overline{A} = \dfrac{h_{\max} - (h_{\min,1} + h_{\min,2})/2}{< h >}$	- dimensionless amplitude	
$\tilde{A} = (h_{\max} - h_{\min})/< h >$	- dimensionless amplitude	
A_c	- integration constant, m^2/s^2	
ΔA	- distance between real and imaginary images of mark-particle on photographic film, m	
b	- interelectrode distance, m	(see, 3)
	- constant	(see, 13.3)
	- parameter, m^5/s	(see, 14)
$B = \mathrm{Re}^3 / W$	- dimensionless parameter	
B	- intermediate expression	(see, 6.8.4)
c	- phase velocity, m/s	
	- phase velocity related to u_0	(see, 6.8 - 6.12)
	- phase velocity related to $q / < h >$	(see, 13.1.2)
	- dimensionless phase velocity	(see, 6.5)
c_g	- group velocity, m/s	
	- group velocity related to u_0,	(see, 6.11)
c_m	- extreme value of phase velocity, m/s	
$c_{\max}$	- maximum value of phase velocity, m/s	
c_i	- imaginary part of dimensionless complex velocity	
c_r	- real part of dimensionless complex velocity	
c_x, c_z	- components of the vector of phase wave velocity	
c_0	- velocity of kinematic wave which is equal to $3u_0$, m/s	
	- dimensionless velocity of kinematic wave which is equal to 3	(see, 6.11)
	- velocity of gravitational wave on	

a shallow water which is equal to $\sqrt{gh_0}$, m/s (see, 6.3; 14)

c_1, c_2 - dimensionless velocities of inertial waves

$\tilde{c} = c\bar{h}/\bar{q}$ - dimensionless phase velocity

$c*$ - dimensionless velocity of soliton

$\bar{c} = c/u_0$ - dimensionless phase velocity

$\bar{c} = c/U$ - dimensionless phase velocity (see, 12)

$\bar{c}_g = c_g/u_0$ - dimensionless group velocity

C - capacitance, F (see, 3.1.5)
- concentration, mol/m^3 (see, 3.3.4)
- integration constant, m^2/s^2 (see, 6.1)
- velocity of shock wave, m/s (see, 6.4)
- concentration, kg/m^3
- concentration, kg/kg (see, 13.3)

C_j - intermediate coefficients, (j = 2,...,9)

$C_f = 2\tau_W/\rho U_0^2$ - shear stress coefficient

C_L - mean flow rate concentration at a distance L, kg/m^3 (see, 13.1)

C_P - specific heat, J/(kg·K)

C_S - concentration on a free surface, kg/m^3 (see, 13.1)

C_W - concentration near the wall, kg/m^3

C_0 - concentration within volume, mol/m^3 (see, 3.3.4)
- concentration within volume, kg/m^3

C_∞ - concentration far from the wall, kg/m^3

$\tilde{C}_{ij}$ - crosscorrelation function, m^2

$\mathrm{Co} = Q/l_1\nu$ - dimensionless parameter, Reynolds number analogue

d - electrode diameter, m (see, 3)
- cylinder diameter, m (see, 8.1)
- constant, (see, 13.3)
- layer thickness behind a jump, m (see, 14)

D - diffusion coefficient, m^2/s
- intermediate expression (see, 6.8.4)

E - intermediate expression

f - function (see, 1, 4, 13.1.2)
- frequency, Hz

f_i - frequency of feed current of the i-th sensor, Hz

Δf - difference in frequencies of currents feeding two different sensors, Hz

$\tilde{f}(h)$ - function of thickness probability density, 1/m

$F = (\mathrm{F}i/\sin\Theta)^{1/11}$ - modified film number

$\tilde{F}(h)$ - function of probability distribution

$F_S = F^{11/5}$ - modified film number

F_0 - initial distribution of phase velocity, m/s

$\mathrm{Fi} = \sigma^3/\rho^3 g\nu^4$ - film number (Kapitza number)

$\mathrm{Fi} = \sigma^3/\rho_1^3 g\nu_1^4$ - film number for a "liquid-liquid" system

$\mathrm{Fo} = 2L/3h_0 Pe_D$ - Fourier number (see, 13.2)

$\mathrm{F}r = u_0^2/gh_0\cos\Theta$ - Froude number

g - free fall acceleration, m/s^2

g_i - projection of gravity acceleration onto the axis x_i, m/s^2

G_0 - function in the solution of Burgers equation, m^2/s

$G = g\overline{h}^3\sin\Theta/\overline{q}\nu$ - Galilei number determined by the averaged values

G - irrigation density, kg/(m·s) (see, 13.3)

$\mathrm{Ga} = gh_0^3\sin\Theta/\nu^2 = 3\,\mathrm{Re}$ - Galilei number

$\mathrm{Ga}_L = gL^3\sin\Theta/\nu^2$ - Galilei number

h - thickness of liquid film, m
- dimensionless thickness related to h_0 (see, 6.8-6.12)
- film thickness related to $<h>$ (see, 13.1.2)

h_i - initial thickness of film, m

h_0 - film thickness by Nusselt, m
- unperturbed thickness, m
- film thickness by Nusselt related to $<h>$ (see, 13.1.2)

h_{max} - maximum thickness, m

h_{min} - minimum thickness, m

h_{00} - calculated thickness (by Nusselt) on the cone at $x = 0$, m (see, 5.4.2)
- calculated thickness (by Nusselt) on the cylinder and sphere at $\Theta = \frac{\pi}{2}$, m (see, 5.4.3-5.4.5)
- calculated thickness (by Nusselt) in the absence of shear stress, m (see, 12)

]$<h>$ - average thickness, m

$\overline{h}$ - thickness averaged over the wave length, m

$\Delta\overline{h}$ - deviation of average thickness from unperturbed value, m

h' - thickness of perturbed layer ("steps" or solitary perturbation), m

h^+ - dimensionless thickness

h_+ - thickness of radial film at $r = r_+$, m

$\tilde{h} = h/\bar{h}$ - dimensionless thickness

$H = \dfrac{h - h_0}{h_0}$ - dimensionless perturbation of film thickness

$H = h / h_0$ - dimensionless film thickness (see, 5.3)

$H = h / l_1$ - dimensionless film thickness (see, 5.4.1)

$H = h / h_{00}$ - dimensionless film thickness (see, 5.4.2 - 5.4.5)

$H_i = h_i / h_0$ - dimensionless initial thickness (see, 5.3)

$H_i = h_i / l_1$ of a film (see, 5.4.1)

$H_i = h_i / h_{00}$ (see, 5.4.2 - 5.4.5)

$H_0(\xi)$ - stationary periodic solution

i - number of primary dimensionalities (see, 1)

- number of pulses in a train (see, 3)
- imaginary unit

I - electric current, A

I_d - diffusion current, A

j - density of mass flux, kg/(m²·s)

$j = \left(\dfrac{\partial \Theta}{\partial Y}\right)_{Y=0}$ - dimensionless density of mass flux (see, 13.1.2)

j_0 - unperturbed value of mass flux density

J, J_0 - intensity of passed and incident radiation, W/m²

$k = 2\pi / \lambda$ - wave number, m⁻¹ (see, 6.1; 6.3; 6.6; 6.7)

$k = 2\pi h_0 / \lambda$ - dimensionless wave number, modulus of wave vector (see, 6.9)

k - dimensionless x-component of the wave number (see, 6.5)

$\vec{k}$ - wave vector, m⁻¹

k_i - imaginary part of dimensionless complex wave number

$k_m = 2\pi / \lambda_m$ - extreme value of the wave number, 1/m (see, 6.1)

- wave number of maximum growth waves, 1/m

k_m - wave number of maximum growth waves related to h_0^{-1} (see, 6.8)

$k_{\min}$ - minimum value of the wave number

k_N - wave number of neutral perturbations, 1/m (see, 6.6)
- dimensionless wave number of neutral perturbations

k_r - real part of dimensionless complex of wave number

k_S - dimensionless wave number

k_x, k_z - components of wave vector

$k_{x,N}$ - x-component of the wave vector of neutral perturbations

k_1, k_2 - wave numbers of neutral perturbations, 1/m

$\tilde{k} = 2\pi < h >/\lambda$ - wave number measured experimentally

$\tilde{k}_{cr}$ - critical wave number measured experimentally

$K = \frac{q}{L} \ln \frac{C_S - C_0}{C_S - C_L}$ - mass transfer coefficient, m/s

K - proportionality factor (see, 3)
- curvature, m^{-1}

K_T - theoretical value of mass transfer coefficient, m/s

$\mathrm{Ka} = r_a |d| / C_P$ - modified Kutateladze criterion of phase transition

$l = (3\nu^2/g)^{1/3}$ - length scale, m

l_0 - longitudinal scale of wavelength order, m

$l_1 = (xh_0^3)^{1/4}$ - length scale, m

L - film path length, m

L_1 - linear operator

L_{in} - length of initial film region, m

L_{in}^T - length of thermal initial region, m

L^+ - dimensionless length

L_s - length of smooth region on the film, m

$\tilde{L} = L/h_0$ - dimensionless film length

$\mathrm{Lu} = a / D$ - Lewis number

m - maximum number of determining similarity criteria (see, 1)
- z-component of dimensionless wave number (see, 6.5)
- dimensionless specific flow rate in the z-direction (see, 6.12)

n - relative refractive index

$n = \frac{C_0 - C_L}{C_0}$ - coefficient (see, 13.1)

$\vec{n}$ - unit normal vector

n_i - i-th component of unit normal vector
N - magnification factor (see, 3.2.6)
- amplitude of interface perturbation, m
Nu - Nusselt number
$\mathrm{Nu}^* = \dfrac{\alpha h}{\lambda_T}$ - Nusselt number
$< \mathrm{Nu}^* > = \dfrac{<\alpha> h}{\lambda_T}$ - average Nusselt number
$\mathrm{Nu}_* = \dfrac{\alpha}{\lambda_T}\left(\dfrac{\nu^2}{g}\right)^{1/3}$ - modified Nusselt number
$\mathrm{Nu}_{\mathrm{is}}$ - Nusselt number for isothermal absorption
p - pressure, Pa
- dimensionless pressure (or pressure perturbation) (see, 6.5)
- pressure perturbation, Pa or dimensionless (see, 6.8; 6.9)
- pressure related to $\rho g h_0$ (see 6.10 - 6.12)
- parameter (integer) (see, 8.3)
- dimensionless function (see, 13.1.2)
p_α - pressure perturbation in the α-th medium, Pa
$\bar{p}$ - unperturbed pressure, Pa or dimensionless
$p^{(i)}$ - i-th approximation for pressure ($i = 0, 1, \ldots$)
P - unperturbed dimensionless pressure
P_0 - atmospheric pressure, Pa
- unperturbed pressure at medium interface, Pa (see, 6.6 - 6.7)
$\mathrm{Pe} = q / a$ - Peclet number
$\mathrm{Pe}_D = q / D$ - diffusion Peclet number
$\mathrm{Pr} = \nu / a$ - Prandtl number
$\boldsymbol{P}$ - total pressure, Pa
$\boldsymbol{P}_\alpha$ - total pressure in the α-th medium, Pa
q - specific flow rate per unit of film width, m^2/s
- specific flow rate related to q_0 (see, 6.10 - 6.12)
q_0 - specific flow rate in a smooth laminar film, m^2/s
$\bar{q}$ - specific flow rate average with respect to wavelength
$< q >$ - mean flow rate, m^2/s

q_T - density of heat flux, W/m^2
q_{TS} - density of heat flux on a free surface, W/m^2
q_{TW} - density of heat flux at the wall, W/m^2
Q - volumetric liquid flow rate, m^3/s
- dimensionless perturbation of specific flow rate related to q_0 (see, 6.11, 6.12)
- parameter (see, 8.3)
r - radius-vector modulus, m (see, 6.12)
- parameter (integer) (see, 8.3)
- radial coordinate, m
$\vec{r}$ - radius-vector, m
r_a - heat of absorption, J/kg
r_0 - jet radius near the wall, m
r_1 - jump radius, m
r_+ - coordinate of the point, where $\delta = h$, m
$\bar{r}$ - dimensionless radial coordinate
$\bar{r}_1$ - dimensionless jump radius
R - curvature radius, m
- maximum radius of cone, m (see, 5.4.2)
- radius of cylindrical or spherical surface, m (see, 5.4.3 - 5.4.5)
$\tilde{R} = R/h_{00}$ - dimensionless radius
$\mathrm{Re} = q / \nu = h_0 u_0 / \nu$ - Reynolds number
$\mathrm{Re} = Q / 2\pi R\nu$ - film Reynolds number at convergent cone and sphere
$\mathrm{Re} = A / 2\nu$ - effective Re number for the Burgers equation
$\mathrm{Re} = h_0 U / \nu_1$ - Re number for a "liquid-liquid" system
Re_{cr} - critical Re number of transition to turbulent regime
Re'_{cr} - critical Re number according to linear theory
$\mathrm{Re}_H = 4q / \nu$ - Reynolds number determined by hydraulic film diameter
$\mathrm{Re}_r = Q / \nu r$ - local Re number
Re_{res} - Reynolds number determined by the thickness of residual layer
Re_W - critical Reynolds number of wave formation
$\mathrm{Re}_x = xU / \nu$ - Reynolds number
$\tilde{\mathrm{Re}} = \bar{q}/\nu$ - Reynolds number
Re_* - critical Re number of standing wave formation
Re' - Reynolds number for a step, solitary

perturbation
s - area, m^2
$S = \sqrt{3 \mathrm{ctg}\,\Theta / \mathrm{Re}}$ - dimensionless velocity of gravitational waves (see, 6.11)
S - dimensionless parameter (see, 10.2)
S^* - critical value of parameter S
$\tilde{S} \equiv \tilde{S}_{ii}$ - spectral density normalized for the second central momentum
$\tilde{S}_{ij}$ - spectral density of thickness pulsations, m^2/Hz
$\mathrm{Sc} = \nu / D$ - Schmidt number
Sc_t - turbulent Schmidt number
$\mathrm{Sh} = \beta L / D$ - Sherwood number
Sh_0 - theoretical value of Sherwood number
$\mathrm{Sh}^L = K h_0 / D$ - Sherwood number
Sh_0^L - theoretical value of Sherwood number
Sh_{is} - Sherwood number for isothermal absorption
$\mathrm{Sh}_r = \beta r / D$ - Sherwood number
$\mathrm{Sh}_x = -\frac{x}{C_W - C_0}\left(\frac{\partial C}{\partial y}\right)_{y=0}$ - Sherwood number
$< \mathrm{Sh}^* > = < \beta > h/D$ - average Sherwood number
t - temperature, °C (see, 13.1.1)
- time, s
- dimensionless time (see, 6.5, 6.8 - 6.12, 12, 13.1.2)
Δt - time interval, s
t_1 - time, s
$\tilde{t} = t u_0 / h_0$ - dimensionless time
T - wave period, s (see, 13.1)
- absolute temperature, K (see, 13.3)
T_0 - initial temperature, K
T_W - temperature at the wall, K
T_f - mean mass temperature, K
T_S - temperature near the free surface
$\vec{T}$ - unit tangential vector
T_i - the i-th component of unit tangential vector
u - longitudinal velocity component, m/s
- longitudinal velocity related to u_0 (see, 6.10 - 6.12)

	- perturbation of longitudinal velocity, m/s or dimensionless	(see, 6.9)
	- perturbation of longitudinal velocity	(see, 6.5)
u_{max}	- maximum velocity, m/s	
u_{res}	- average velocity of residual layer, m/s	
$u_0 = gh_0^2 / 3\nu$	- average velocity of laminar film by Nusselt, m/s	
u_0	- mean flow rate velocity, m/s	(see, 14)
u_i	- the i-th component of velocity vector, m/s	(see, 4, 6.1)
	- dimensionless i-th component (or perturbation) of velocity	(see, 6.5)
u_1, u_2, u_3	- dimensionless velocities in a film, the boundary layer of external medium, outside the boundary layer, respectively	(see, 12)
$u^{(i)}$	- the i-th approximation	
$\overline{u}$	- unperturbed longitudinal velocity, m/s or dimensionless	
u_α	- perturbation of longitudinal velosity in the α-th medium, m/s	(see, 6.6, 6.7)
U	- velocity at the film surface, m/s	
	- velocity at the surface related to $q / < h >$	(see, 13.1.2)
	- velocity at the surface related to u_0	(see, 6.10 - 6.11)
	- velocity outside the boundary layer	(see, 13.2)
	- dimensionless unperturbed longitudinal velocity component	(see, 6.5)
$U_0 = gh_0^2 / 2\nu$	- surface velocity of laminar vertical film by Nusselt, m/s	
U_0	- jet velocity in the minimum cross-section, m/s	
U_i	- unperturbed dimensionless i-th velocity component	(see, 6.4)
U_α	- part of longitudinal velocity perturbation depending on y in the α-th medium, m/s	(see, 6.6, 6.7)
U_∞	- unperturbed velocity of moving medium, m/s	
U_∞^{cr}	- critical value of unperturbed velocity, m/s	
$< U >$	- average surface velocity, m/s	
v	- cross velocity component, m/s	
	- cross velocity related to εu_0	(see, 6.9 - 6.12)
v_α	- perturbation of cross velocity in the α-th medium, m/s	
$v^{(i)}$	- the i-th approximation	

V	- potential difference, V	
V_α	- part of cross velocity perturbation depending on y in the α-th medium, m/s	
w	- z-component of velocity, m/s	
	- z-component of velocity related to u_0	(see, 6.9, 6.12)
$w^{(i)}$	- the i-th approximation	
$W=\sigma/\rho g h_0^2 \sin\Theta$	- Weber number	
$We=\sigma/\rho h_0 u_0^2$	- Weber number	
$We=\sigma/h_0 U^2 \rho_1$	- Weber number for a "liquid-liquid" system	(see, 12)
$\tilde{W}=\sigma\bar{h}/3\rho\bar{q}\nu$	- Weber number determined by average values	
x	- longitudinal coordinate, m	
	- longitudinal coordinate related to h_0	(see, 6.8 - 6.12)
	- longitudinal coordinate related to l_0	(see, 12)
	- longitudinal coordinate related to λ	(see, 13.12)
x_i	- coordinate of mark-particle at the i-th flash, m	(see, 3.2.6)
	- coordinate of film formation onset, m	(see, 5.4)
	- Cartesian coordinate, i = 1, 2, 3, m	(see, 6.1)
	- dimensionless Cartesian coordinate	(see, 6.5)
$x_1=\int_0^1 \frac{U d\xi}{c-U}$	- characteristic distance in absorption problems	(see, 13.1.2)
x_n	- dimensionless coordinate of maximum points of augmentation factor (n = 1, 2,...)	(see, 13.1.2)
x_l, x_w, x_t	- lengths of regions of laminar, wave, turbulent flow regimes, m	(see, 13.5)
Δx	- width of shock wave front, m	
$\bar{x}=x/a$	- dimensionless coordinate for standing waves	
$\tilde{x}=x/h_0$	- dimensionless longitudinal coordinate	(see, 6.10.2)
X	- point coordinate at the x-axis, m	(see, 6.12, 10.2)
$X=x/h_0$	- dimensionless coordinate	(see, 5.3)
$X=x/l_1$	- dimensionless coordinate	(see, 5.4.1)
$X=x/L$	- dimensionless coordinate	(see, 5.4.2)
y	- cross coordinate, m	
	- distance from the wall, m	
	- dimensionless cross coordinate	(see, 6.5)
	- dimensionless cross coordinate related to h_0	(see, 6.8 - 6.12, 12)

y_c - cross dimensionless coordinate of critical layer

y_i - cross coordinate of mark-particle at the i-th flash, m

$\overline{y} = y / a$ - dimensionless coordinate for standing waves

$\overline{y}_0$ - dimensionless characteristics of crest shape of standing waves

Y - cross coordinate related to $< h >$ (see, 13.1.2)

- part of potential φ depending on y, m^2/s
- integration constant, m^2/s

z - number of independent dimensional constants (see, 1)

- coordinate, m
- dimensionless coordinate related to l_0 (see, 6.9, 6.12)
- coordinate in a cylindrical system of coordinates, m (see, 14)

$\tilde{z} = \frac{z}{h_0}$ - dimensionless coordinate

Z - point coordinate at the z-axis, m

α - heat transfer coefficient, $W/(m^2 \cdot K)$

- coefficient characterizing the velocity profile (see, 4, 6.10, 6.11)
- parameter (see, 10.2)

$\alpha = -\lambda_T \left(\frac{\partial T}{\partial y} \right)_{y=0} \Big/ \left(T_W - T_f \right)$ - heat transfer coefficient, $W/(m^2 \cdot K)$ (see, 13.4)

$\alpha = q_T / (T_W - T_S)$ - heat transfer coefficient, $W/(m^2 \cdot K)$ (see, 13.5)

$< \alpha >$ - average heat transfer coefficient, $W/(m^2 \cdot K)$

$\overline{\alpha}$ - heat transfer coefficient averaged over wavelength, $W/(m^2 \cdot K)$

α_0 - heat transfer in the absence of waves, $W/(m^2 \cdot K)$

α_l, α_w, α_t - average coefficient of heat transfer in the regions of laminar, wave and turbulent flow regimes, $W/(m^2 \cdot K)$

$(-\alpha)$ - spatial increment related to h_0^{-1} (see, 6.11, 7)

β - coefficient characterizing the velocity profile (see, 4, 6.10)

- coefficient, m^3/s^2 (see, 6.3)

	- complex increment, 1/s	(see, 6.6)
	- time increment related to u_0 / h_0	(see, 6.11)
	- mass transfer coefficient	
$\beta = j / (C_0 - C_S)$	- mass transfer coefficient, m/s	(see, 13.1)
β^+	- dimensionless mass transfer coefficient	
γ	- specific electric conductivity, S/m	(see, 3)
	- coefficient characterizing the velocity profile	
	- coefficient, m^3/s	(see, 6.3)
	- modulus of dimensionless wave number	(see, 6.5)
	- dimensionless parameter	(see, 13.12)
$\gamma = c_g / c$	- group to phase velocity ratio	(see, 10.2)
Γ	- electric conduction, S	(see, 3)
δ_d	- thickness of diffusive layer, m	
	- thickness of diffusive layer related to $< h >$	(see, 13.1.2)
δ_T	- thickness of thermal layer, m	
δ_{ij}	- Kroneker symbol	
$\Delta = \frac{\partial^2}{\partial x^2} + \frac{\partial^2}{\partial y^2} + \frac{\partial^2}{\partial z^2}$	- Laplacian, $1/m^2$	(see, 4)
Δ	- "supercritical state" parameter,	(see, 6.11)
	- thickness of boundary layer, m	(see, 12)
$\delta(x)$	- delta-function, 1/m	(see, 6.4)
δ	- constant	(see, 6.5)
	- scale of film thickness perturbation	(see, 6.8 - 6.11)
	- dimensionless thickness of boundary layer	(see, 12)
	- thickness of boundary layer, m	
δ_d^0	- unperturbed thickness of diffusive layer	
δ_d'	- pulsation amplitude of diffusive layer thickness	
$\varepsilon = h_0 / l_0$	- long-wave parameter	
$\varepsilon = < h > / \lambda$	- long-wave parameter	(see, 13.1.2)
ε	- relative dielectric permeability	(see, 3)
$\varepsilon_0 = 8.854 \cdot 10^{-12}$	- electric constant, F/m	
$\zeta = x / t$	- self-similar variable, m/s	
η	- perturbation of layer thickness, m	(see, 6.1, 6.3)
	- boundary deviation from unperturbed state, m	(see, 6.6, 6.7)
	- self-similar coordinate	(see, 14)
$\eta = y / h$	- self-similar coordinate	(see, 4)
$\eta = Y / \delta_d$	- self-similar coordinate	(see, 13.1.2)

$\eta = y\left(\frac{gh_0}{q\nu Dx}\right)^{1/3}$ - self-similar coordinate (see, 13.2)
η - amplitude of layer thickness perturbation, m
$\upsilon = DL/h^2U$ - contact time
Θ - angle of film flow inclination to horizon, rad
$\Theta = \frac{C - C_S}{C_0 - C_S}$ - dimensionless concentration (see, 13.1.2)
Θ_i - initial angle of film flow, rad
κ - linear absorption coefficient, 1/m
λ - wavelength, m
λ_m - extreme value of wavelength, m
λ_T - heat conduction coefficient, W/(m·K)
Λ - length of a smooth region between waves, m
μ - dynamic viscosity, Pa·s
- ratio of dynamic viscosities (see, 12)
μ_1, μ_2 - dynamic viscosity in a film and external medium, respectively, Pa·s
$\tilde{\mu}_i$ - central moment
ν - kinematic viscosity, m^2/s
- coefficient in the Burgers equation, m^2/s (see, 6.4)
- ratio of kinematic viscosities (see, 12)
ν_1, ν_2 - kinematic viscosity of the first and second media, m^2/s
ξ - independent variable, m (see, 6.4)
$\xi = kx + mz - \omega t$ - dimensionless "travelling" coordinate (see, 6.5)
$\xi = x - ct$ - dimensionless "travelling" coordinate (see 6.11, 8, 13.11)
ξ_1 - independent variable
Π_α - part of pressure perturbation depending on y in the α-th medium, N/m^2
π - polynomial, $1/m^2$
ρ - density, kg/m^3
- density ratio (see, 12)
ρ_α - density of the α-th medium, kg/m^3
σ - surface tension, kg/s^2
- dispersion parameter (see, 6.4)
σ_{ij} - stress tensor, N/m^2
σ_A - mean root square deviation of large wave amplitude, m
τ - time interval, s (see, 11)
$\tau = \tau_S h_0 / \mu_1 U$ - dimensionless shear stress

at interface (see, 12)

$\tau = \int_0^1 \frac{d\xi}{c-U}$ - dimensionless drift time of liquid particle along the surface (see, 13.1.2)

$\vec{\tau}$ - unit tangential vector

τ_i - the i-th component of unit tangential vector

τ_S - shear stress at interface, N/m^2

τ_W - shear stress at the solid wall, N/m^2

$< \tau_W >$ - mean shear stress at the wall, N/m^2

$\sqrt{\overline{\tau_W'^2}}$ - RMS of shear stress pulsations at the wall, N/m^2

φ - velocity potential, m^2/s (see, 6.1)
- function in the Cole-Hopf transformation (see, 6.4)
- part of cross velocity perturbation depending on y (see, 6.5)
- angle of wave propagation relatively to the x-axis, rad (see, 6.12, 10.2)
- perturbation of periodic solution, (see, 8.3)
- phase (see, 13.1.2, 13.5)

$\varphi = \tilde{h} - 1$ - dimensionless thickness deviation from the average value (see, 6.10.2)

φ_i - part of stream function perturbation depending on y in the i-th medium

φ_0 - characteristic angle of wave crest shape, degree

$\Phi = 9.648 \cdot 10^4$ - Faraday' constant, C/mol
- dimensionless function (see, 6.11)

$\Phi(\xi)$ - periodic function

$\Phi_0(\xi)$ - initial distribution of function $\varphi(x, t)$

χ - independent variable, m (see, 6.4)

$\chi = \beta / \alpha^2$ - coefficient characterizing the velocity profile (see, 6.11.1)

ψ - perturbation of stream function, m^2/s or dimensionless (see, 6.8)
- part of pressure perturbation depending on y (see, 6.5)

$\overline{\Psi}$ - unperturbed value of stream function, m^2/s or dimensionless

$\psi^{(i)}$ - the i-th approximation for the stream function

ψ_i - perturbation of dimensionless stream function in the i-th medium

Ψ	- stream function, m^2/s	
	- dimensionless stream function	(see, 13.2)
ω	- angular frequency, rad/s	
	- dimensionless frequency	(see, 6.5)
	- complex frequency, rad/s	(see, 6.7)
	- complex frequency related to u_0 / h_0	(see, 6.8, 6.9)
ω_i	- imaginary part of dimensionless complex frequency	
ω_r	- real part of dimensionless complex frequency	